

Amendments to the Abstract:

Please amend the Abstract as follows:

~~The invention relates to a catheter which is suitable in particular for use in MR imaging. In order to avoid undesirable heating of the tissue surrounding the catheter by the MR excitation field, the catheter in accordance with the invention comprises:~~

~~-a catheter sleeve (2);~~

~~-a hollow guide channel or lumen (3) within the catheter sleeve (2) for the introduction of a medical instrument, and~~

~~-two electrical conductors (4) which are enclosed by a cable sheath (5) of a dielectric material and serve to transmit RF signals within the catheter envelope (2), the dielectric material having a relative permittivity (ϵ_r) smaller than 4, the diameter of the electrical conductors (4) being between 5 and 50 μm , notably between 10 and 30 μm , and the distance between the electrical conductors (4) being smaller than 300 μm , in particular smaller than 200 μm .~~

Fig. 1

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A catheter (1) which is suitable for use in MR imaging avoids undesirable heating of the tissue surrounding the catheter by the MR excitation field. The catheter includes a catheter sleeve (2), a hollow guide channel or lumen (3) within the catheter sleeve for the introduction of a medical instrument, and two electrical conductors (4) which are enclosed by a cable sheath (5) of a dielectric material. The electrical conductors serve to transmit RF signals within the catheter envelope. In order to reduce tissue heating around the catheter, the conductors and the cable sheath are configured not to support RF signals at the imaging magnetic resonance frequency by selecting a shortening factor such that the common mode is shifted beyond the magnetic resonance frequency. The dielectric material has a relative permittivity (ϵ_r) smaller than 4, the